

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently amended) A sensor for detecting the presence of an analyte in a solution, comprising:
 - a photonic crystal containing the solution;
 - a light source emitting a light beam at an angle to said photonic crystal, said light beam having a wavelength, wherein said angle and said wavelength of said light beam are capable of producing a superprism effect in said photonic crystal; and
 - a position sensing detector for detecting a change in the position of the light beam after said light beam is transmitted through said photonic crystal and the solution.
2. (Original) The sensor according to claim 1 wherein said photonic crystal comprises a porous polymer prepared by polymerization of one or more polymerizable components around a colloidal template followed by the selective removal of said colloidal template.
3. (Original) The sensor according to claim 2 wherein said colloidal template is an ordered, monodisperse colloidal template and said porous polymer is an ordered, monodisperse macroporous polymer.
4. (Original) The sensor according to claim 3 wherein said ordered, monodisperse macroporous polymer comprises a material selected from the group consisting of poly(methyl methacrylate) and polystyrene.
5. (Previously presented) The sensor according to claim 1 wherein said photonic crystal and the wavelength and the angle of said light beam cause a displacement of said light beam of at least 2 μm when the refractive index of said photonic crystal changes by 0.002.

6. (Previously presented) The sensor according to claim 1 wherein said photonic crystal and the wavelength and the angle of said light beam cause a displacement of said light beam of at least 4 μm when the refractive index of said photonic crystal changes by 0.002.

7.-14. (Canceled)

15. (Previously presented) The sensor according to claim 1 wherein the sensor includes an array of light sources and position-sensing detectors, wherein each light source has an associated position-sensing detector.

16. (Previously presented) The sensor according to claim 15 wherein each light source emits a light beam at a different wavelength, wherein each wavelength is tuned to detect a different concentration of the analyte in said solution.